

Florida Department of Environmental Protection Coral Reef Conservation Program



NOVA SOUTHEASTERN UNIVERSITY

Southeast Florida Coral Reef Evaluation and Monitoring Project

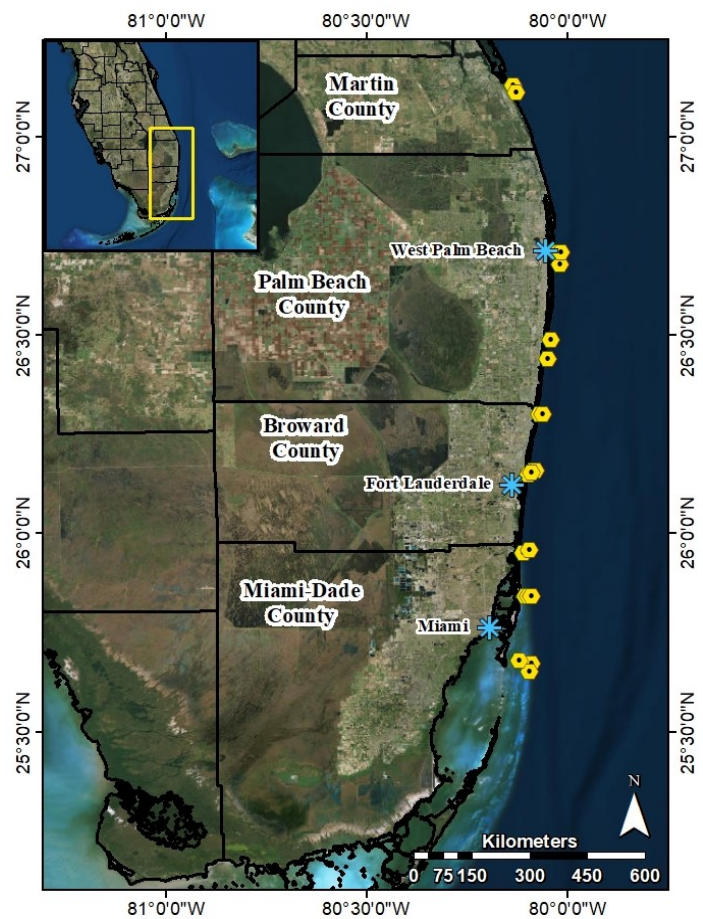
Program Overview



The Southeast Coral Reef Evaluation and Monitoring Project (SECREMP) provides local, state, and federal resource managers with an annual coral reef status report for the Southeast Florida Coral Reef Ecosystem Conservation Area.

The southeast Florida coral reef ecosystem is offshore a highly urbanized mainland (population > 6 million) influenced by numerous human activity-related local and global stressors. To document changes potentially related to increasing stressors, the Florida Department of Environmental Protection (FDEP) working with Florida Fish and Wildlife Conservation Commission (FWC) and Nova Southeastern University (NSU) initiated a long-term annual coral reef monitoring program in 2003 along the southeast Florida coast. In order to provide continuity in monitoring efforts along the entire Florida Reef Tract (FRT), the Southeast Florida Coral Reef Evaluation and Monitoring Project (SECREMP) was established as an expansion of the FWC managed Coral Reef Evaluation and Monitoring Project (CREMP) in the Florida Keys.

SECREMP provides local, state, and federal resource managers annual reports on the status and condition of the southeast Florida (Miami-Dade, Broward, Palm Beach, and Martin counties) coral reef system as well as information on temporal changes in resource condition. Survey methods include photographic transects to quantify percent cover of major benthic taxa (stony corals, sponges, octocorals, macroalgae, etc.) and demographic surveys to quantify abundance, size distribution, and overall condition of stony corals, octocorals, and the giant barrel sponge. SECREMP is also a partnership between FDEP, FWC, and NSU that facilitates collaboration and knowledge sharing benefiting coral reef ecosystems nationwide.



Map of the 22 SECREMP sites from Martin County in the north to Miami-Dade County in the South

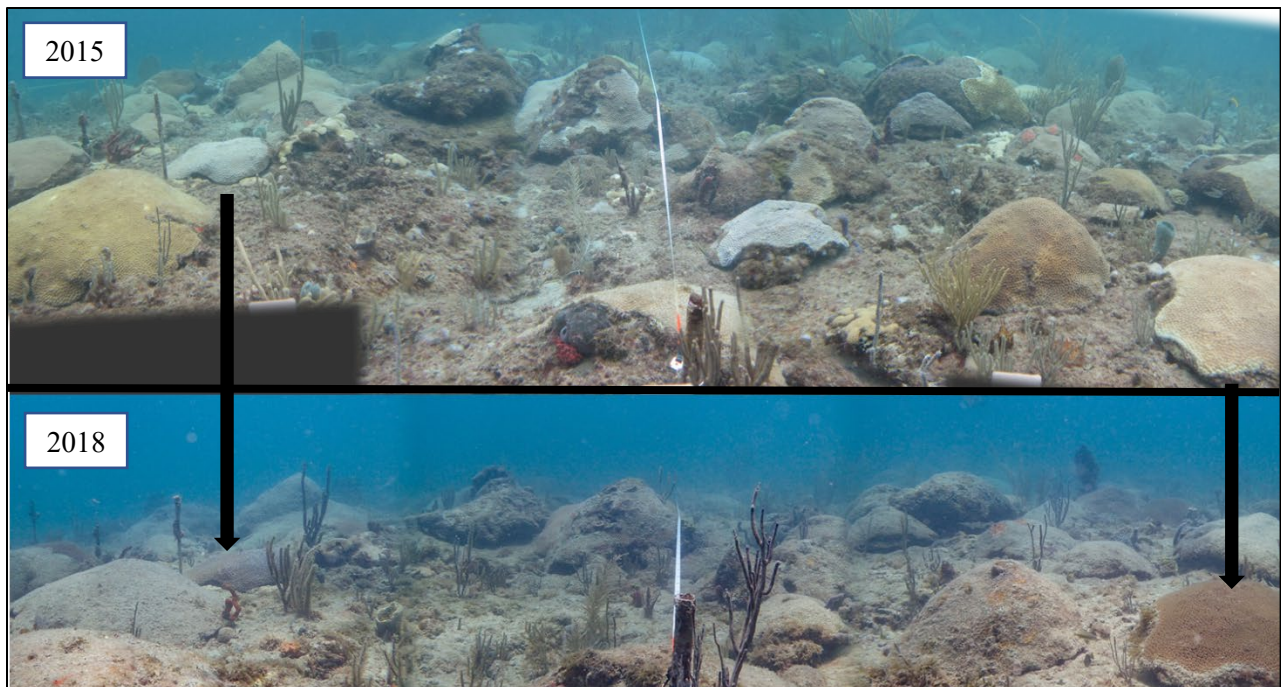
2018 SECREMP Results

Prior to the 2018 sampling year, Southeast Florida Coral Reef Ecosystem Conservation Area experienced significant stony coral community declines largely due to an unprecedented stony coral disease event. In 2018, further significant losses were recorded in stony coral cover and live tissue area (LTA), a metric used to estimate amount of coral tissue. Region-wide LTA was significantly lower starting in 2016 with no significant recovery through 2018; there was a significant 40% loss in LTA from 2015 to 2018. During the same time period, the region suffered a 57% loss in stony coral cover. This disease event was very likely the greatest contributing factor to the significant loss of stony coral colonies and LTA identified within the SECREMP sites. Conditions appear to be improving with a decrease disease prevalence in 2018, and the recording of many juvenile stony corals of the species affected by disease in the SECREMP sites. Additionally, it is positive to note that neither the octocoral nor barrel sponge communities appear to have been impacted by the disease event.



SECREMP diver measuring octocorals

The chronic nature of disturbances to and the significant economic value of Southeast Florida Coral Reef Ecosystem requires comprehensive, long-term monitoring to define and quantify change and to help identify threats to the ecosystem. Both continual region-wide monitoring (SECREMP) and improved incident-specific monitoring are necessary if resource managers are to develop sound management plans for coral reefs that allow continued use and realization of the economic value of these fragile marine ecosystems. The value for a long-term region-wide monitoring program is highlighted by the information, albeit concerning, presented in this report.



Within the area shown in these Broward County SECREMP site images, there were over 25 living corals in 2015 (top image), unfortunately by 2018 (bottom image) only two colonies, shown by the arrows, remained alive.